



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

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December 13, 2013

Jeff Jager  
Oldcastle Stone Products  
110 Marble Street  
Lee, Massachusetts 01238

**RE:** Lee  
Transmittal No.: X258249  
Application No.: WE-13-009  
Class: OP  
FMF No.: 531945  
**AIR QUALITY PLAN APPROVAL**

### Administrative Amendment

Dear Mr. Jager:

The Massachusetts Department of Environmental Protection ("MassDEP"), Bureau of Waste Prevention, has reviewed your Limited Plan Application ("Application") listed above. This Application concerns the proposed construction and operation of a nonmetallic mineral processing operation at your existing facility located at Marble Street in Lee, Massachusetts ("Facility").

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 "Air Pollution Control," regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP's review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

Plan Approval #WE-13-009, which was issued on May 9, 2013, has been administratively amended by MassDEP to remove a visolite leak detection test requirement and related recordkeeping requirements for the CAMCORP Model 7BH6x49 pulse-jet bin vent filter associated with Emission Unit #14. The visolite testing and recordkeeping requirement has been removed since the facility has stated, and MassDEP agrees, that it is technically infeasible to perform the test since the filter does not have an integral fan nor is there access to perform the test. The Permittee may make the approved changes herein, upon the submittal of an amended Title V Operating Permit Renewal Application (BWP AQ 12) which incorporates these changes.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator ("Permittee") must comply in order for the Facility to be operated in compliance with this Plan Approval.

**This Plan Approval will supersede Plan Approval #WE-13-009, issued May 9, 2013, in its entirety.**

## **1. DESCRIPTION OF FACILITY AND APPLICATION**

Oldcastle Stone Products has submitted an application to construct and operate a nonmetallic mineral processing operation at their existing facility, which currently operates in accordance with Title V Operating Permit #1-O-95-101.

The nonmetallic mineral processing operation will have a maximum throughput of 195,000 tons of limestone per year and a maximum operating schedule of 6,240 hours per year. The process will consist of the following pieces of equipment.

**Table 1.**

<b>Equipment</b>	<b>Size/Capacity</b>
Dump Hopper	50 ton
Vibrating Grizzly Feeder	~250 ton per hour
Feed Belt Conveyor	30" x 155'; ~250 ton per hour
Raw Material Storage Silo	100 ton
Size 73 Raymond Roller Mill	37 ton/hour
Natural Gas-Fired Flash Dryer	9.5 MMBtu/hr
Static Air Cyclone	N/A
Rotary Air Lock	N/A
Pneumatic Conveying Line	2,000 ACFM @ 80°F, 8" Line
Six Existing Silos	200 ton, 200 ton, 100 ton, 140 ton, 75 ton, 75 ton

Bulk crushed limestone, which will be received damp from the quarry, will be delivered by truck or front-end loader to the 50 ton dump hopper. The hopper will feed the limestone onto a ~ 250 ton per hour vibrating grizzly feeder where oversized material will be separated and discharged to the ground. Material that passes through the grizzly feeder will be dropped onto the 30" x155' feed belt conveyor, which is fully enclosed except where the material enters and exits the conveyor, and conveyed to a 100 ton raw material storage silo. Limestone from the storage silo will be transferred by a vibrator feeder pan into the 37 ton per hour Size 73 Raymond roller mill. Air, which has been preheated (~220°F) from the direct-fired 9.5 million Btu per hour (MMBtu/hr) natural gas-fired flash dryer, will be introduced into the system air flow between the

outlet of the system fan and prior to the intake of the mill. The preheated air will flash dry the limestone as it is being ground to a desired fineness. After milling, the pulverized limestone will be separated from the system air flow with a static air cyclone. The static air cyclone will not be exhausted to atmosphere. Finished pulverized limestone will be discharged from the cyclone through a rotary airlock into a material pump and then pneumatically conveyed through an 8" conveying line to any one of six existing silos for bulk delivery, pelletizing and bagging. The pneumatic conveying system has a maximum capacity of 2,000 ACFM @ 80°F.

The 100 ton raw material silo discharge, Raymond roller mill, static air cyclone and portions of the pneumatic conveyor will be located in a building which will be fully enclosed except for door openings. There are no building vents.

The system air used for the milling process, which will include the combustion products from the flash dryer, will be vented to an existing Fuller-Draco Plenum Pulse 96-6-6000 baghouse which currently controls the existing limestone screening, transfer, loadout and bagging operation identified as Emission Unit (EU) #7 in Operating Permit #1-O-95-101. The baghouse is equipped with six compartments, each with 96 woven polyester bags, a maximum air flow of 36,000 actual cubic feet per minute (ACFM) at 250°F, a filtering surface area of 11 square feet per bag, a net air to cloth ratio of 7:1 with one compartment offline for cleaning, a gross air to cloth ratio of 6:1 with all compartments operating and instrumentation to continuously monitor the differential pressure across the fabric collector. The baghouse will also be equipped with instrumentation to continuously monitor the inlet temperature to the baghouse. The baghouse has a particulate matter control efficiency of 99.9%. A pulse jet cleaning system will be used for cleaning the filters. The baghouse will be capable of controlling both EU #7 and the milling process since the combined maximum air flow rate is expected to be 32,000 ACFM which is less than the rated maximum capacity based on the milling process maximum air flow rate of 14,000 ACFM at 140°F and the EU #7 maximum air flow rate of 18,000 ACFM.

The pneumatic conveyor and two existing 200 ton storage silos will be controlled by a CAMCORP Model 7BH6x49 Pulse-Jet bin vent filter. The bin vent filter will be equipped with 49 polyester/polytetrafluoroethylene membrane filter bags, a maximum air flow of 2,500 ACFM @ 120°F, a total filter area of 470 square feet, a maximum air to cloth ratio of 5.3:1, instrumentation to continuously monitor the differential pressure across the bin vent filter, a particulate matter control efficiency of 99.99% and a reverse/pulse jet cleaning system for cleaning the filters. The bin vent filter has been oversized to ensure the pneumatic conveying system cannot pressurize the silos.

The other four existing storage silos (100 ton, 140 ton, 75 ton and 75 ton), which will be used for receiving material from the pneumatic conveyor line, are currently being used by other processes at the facility and are vented to existing fabric filters. The 100 ton and 140 ton silos are vented to the existing fabric filter which is used for controlling the limestone screens, grinding mills, elevators and bagging machines identified as EU #8 in Operating Permit #1-O-95-101. The two 75 ton silos are vented to the existing fabric filter used for controlling the limestone pelletizing

plant, identified as EU #11 in Operating Permit #1-O-95-101. The four storage silos are controlled by fabric filters which are capable of achieving a particulate matter control efficiency of 99.9% and are therefore exempt from the plan approval requirements of 310 CMR 7.02(4) pursuant to 310 CMR 7.03(12).

The annual air contaminant emissions from the proposed process include the total particulate matter (PM) emissions (including PM with an aerodynamic diameter less than or equal to 10 microns, known as PM10, and PM with an aerodynamic diameter less than or equal to 2.5 microns, known as PM2.5) from the Raymond roller mill process, the pneumatic conveyor, two 200 ton silos as well as fugitive emissions from the hopper, vibrating grizzly feeder and conveyor transfer points. The PM emissions from the Raymond roller mill process, which include PM emissions from the combustion of natural gas, and the pneumatic conveyor have been based on a controlled emission rate of 0.014 grains per dry standard cubic foot and 0.003 grains per dry standard cubic foot, respectively, as well as 6240 hours per year of operation. The fugitive PM emissions from the hopper, vibrating grizzly feeder and conveyor transfer points have been based on a maximum throughput of 195,000 tons per year and emission factors from EPA AP-42 Table 11.19.2-2 (dated August 2004). Air contaminant emissions from the natural gas-fired 9.5 MMBtu/hr flash dryer have been calculated using EPA AP-42 emission factors from Section 1.4 and a maximum operating schedule of 6,240 hours per year. The following air contaminant emissions have been calculated by Oldcastle Stone Products.

**Air Contaminant Emissions  
(Tons per year)**

**Table 2.**

Source	PM	PM10	PM2.5	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO2)	Carbon Monoxide (CO)	Volatile Organic Compound (VOCs)	Hazardous Air Pollutants (HAPs)
<b>Raymond Roller Mill Process including Flash Dryer</b>	4.22	4.22	4.22	1.45	0.017	2.44	0.16	0.055
<b>Pneumatic Conveying System and two-200 ton storage silos</b>	0.15	0.15	0.15	-	-	-	-	
<b>Fugitive Emissions</b>	.27	0.097	0.097			-		
<b>Total</b>	<b>4.64</b>	<b>4.47</b>	<b>4.47</b>	<b>1.45</b>	<b>0.017</b>	<b>2.44</b>	<b>0.16</b>	<b>0.055</b>

**Best Available Control Technology Analysis**

The nonmetallic mineral processing operation must satisfy the best available control technology (BACT) requirements of 310 CMR 7.02(8)(a)2. However, the 9.5 MMBtu/hr natural gas-fired flash dryer and 6 existing storage silos are exempt from the requirements of 310 CMR 7.02(4) and therefore not subject to 310 CMR 7.02(8)(a)2. in accordance with 310 CMR 7.02(2)(b)15.a. and 310 CMR 7.03(12), respectively.

The facility has requested to limit the limestone throughput of the Raymond roller mill process to no more than 195,000 tons per year and to limit the hours of operation of the Raymond roller mill and the pneumatic conveyor to no more than 6,240 hours per year each. The Raymond roller mill cannot operate without the operation of the pneumatic conveying system and operating the pneumatic conveying system without the mill would be of no value since there would be no material. Therefore, a non-resettable hour meter on the Raymond roller mill will be sufficient to monitor and record the number of hours of operation for the mill and the pneumatic conveyor.

To minimize fugitive PM emissions, a fully enclosed building, except for door openings, will be used to house the 100 ton raw material silo discharge, Raymond roller mill, static air cyclone and portions of the pneumatic conveyor. Drop heights from trucks or front-end loaders unloading bulk limestone into the 50 ton dump hopper will be kept as short as possible. The belt conveyor will be equipped with a full enclosure, except for where the material enters and exits, and the pulverized limestone will be transferred using an enclosed pneumatic conveyor system.

In addition, a baghouse will be used to control the PM emissions from the Raymond roller mill and a bin vent filter will control the PM emissions from the pneumatic conveyor and two 200 ton storage silos. The baghouse and bin vent filter will each be equipped with instrumentation to continuously monitor the differential pressure across the control device. The baghouse will also be equipped with a temperature monitor that will have audible and visual alarms to ensure that the inlet temperature does not exceed 250°F. A sufficient quantity of spare filters will be kept on hand in order to be able to immediately replace any filters requiring replacement due to deterioration resulting from routine operation of Raymond roller mill, pneumatic conveying system or the associated baghouse/bin vent filter. The proposed PM emission rate from the baghouse will be limited to 0.014 grains per dry standard cubic foot which is consistent with the June 2011 MassDEP Top Case Best Available Control Technology Guidance – Mechanical & Miscellaneous Sources – Rock Crushing. In addition the proposed PM emission rate from the bin vent filter will be limited to 0.003 grains per dry standard cubic foot which is consistent with the June 2011 MassDEP Top Case Best Available Control Technology Guidance – Dry Bulk Material Handling and Unloading.

Fugitive particulate matter emissions discharged to the atmosphere from the building enclosing the Raymond roller mill will not exhibit greater than 7 percent opacity. Additionally, fugitive particulate matter emissions discharged to the atmosphere from, the hopper, vibrating grizzly feeder and any belt conveyor transfer point will not exhibit greater than 7 percent opacity.

### **Regulatory Applicability**

In addition to being subject to the BACT requirements of 310 CMR 7.02(8)(a)2, the facility is subject to the visible emission requirements of 310 CMR 7.06, the dust, odor, construction and demolition requirements of 310 CMR 7.09 and the noise reduction requirements of 310 CMR 7.10.

The Raymond roller mill and the 30" x 155' conveyor belt are subject to Subpart OOO of the federal Standards of Performance for New Stationary Sources for Nonmetallic Mineral Processing Plants, 40 CFR Part 60.670 through 60.676 and shall comply with the applicable requirements.

## **2. EMISSION UNIT (EU) IDENTIFICATION**

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

<b>Table 1</b>			
<b>EU#</b>	<b>Description</b>	<b>Design Capacity</b>	<b>Pollution Control Device (PCD)</b>
14	Nonmetallic Mineral Processing Operation consisting of: <ul style="list-style-type: none"> <li>• 50 ton Dump Hopper</li> <li>• Vibrating Grizzly Feeder -250 ton per hour</li> <li>• Enclosed Feed Belt Conveyor -30" x 155', 250 ton per hour</li> <li>• Raw Material Storage Silo - 100 ton</li> <li>• Size 73 Raymond Roller Mill - 37 ton per hour</li> <li>• 9.5 MMBtu/hr Natural Gas-Fired Flash Dryer</li> <li>• Static Air Cyclone</li> <li>• Rotary Air Lock</li> <li>• 8" Pneumatic Conveying Line</li> <li>• 6 Dry Material Storage Silos - 200 ton, 200 ton, 100 ton, 140 ton, 75 ton, 75 ton</li> </ul>	37 tons per hour	1. Fuller-Draco Plenum Pulse 96-6-6000 baghouse 2. CAMCORP Model 7BH6x49 pulse-jet bin vent filter

### **Table 1 Key:**

EU# = Emission Unit Number  
PCD = Pollution Control Device

### 3. APPLICABLE REQUIREMENTS

#### A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2 below:

Table 2a			
EU#	Operational / Production Limit	Air Contaminant	Emission Limit
14	1. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the Permittee shall process no more than 195,000 tons of limestone in any 12 consecutive month period.	Opacity	1. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, fugitive particulate matter emissions discharged to the atmosphere from the 50 ton Dump Hopper and the vibrating grizzly feeder shall each not exhibit greater than 7 percent opacity at any time.
	2. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the Raymond roller mill and the pneumatic conveyor shall each operate no more than 6240 hours in any 12 consecutive month period.		2. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2 and 40 CFR 60.672(b), fugitive particulate matter emissions discharged to the atmosphere from the conveyor belt and any conveyor belt transfer point shall not exhibit greater than 7 percent opacity at any time.
			3. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2 and 40 CFR 60.672(e)(1), fugitive particulate matter emissions discharged to the atmosphere from openings in the building, which contains the Raymond roller mill, shall not exhibit greater than 7 percent opacity at any time.

Table 2b			
EU#	Operational / Production Limit	Air Contaminant	Emission Limit
14	See Table 2a	PM/PM10/PM2.5	4. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2 and 40 CFR 60.672(a), the concentration of total particulate matter, including PM-10 and PM2.5, from the exhaust of the Fuller-Draco Plenum Pulse 96-6-6000 baghouse associated with the Raymond roller mill shall not exceed 0.014 grains per dry standard cubic foot of effluent gas volume.
			5. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the concentration of total particulate matter, including PM-10 and PM2.5, from the exhaust of the CAMCORP Model 7BH6x49 pulse-jet bin vent filter associated with the pneumatic conveying system shall not exceed 0.003 grains per dry standard cubic foot of effluent gas volume. In addition, there shall be no visible emissions.
			6. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, EU #14 shall not exceed 4.64 tons of PM, including PM10 and PM2.5, in any 12 consecutive month period
			7. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, EU #14 shall not exceed 4.47 tons of PM10 and PM2.5 in any 12 consecutive month period
		Smoke	8. ≤ No. 1 of the Chart, except No. 1 to No. 2 for no more than 6 minutes aggregate during any one hour; at no time to exceed No. 2 of the Chart

**Table 2 Key:**

EU# = Emission Unit Number

PM = Total Particulate Matter

PM<sub>10</sub> = Particulate Matter less than or equal to 10 microns in diameter

PM<sub>2.5</sub> = Particulate Matter less than or equal to 2.5 microns in diameter

≤ = Less than or equal to



**B. COMPLIANCE DEMONSTRATION**

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5 below:

<b>Table 3a</b>	
<b>EU#</b>	<b>Monitoring and Testing Requirements</b>
14	1. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the Fuller-Draco Plenum Pulse 96-6-6000 baghouse and the CAMCORP Model 7BH6x49 pulse-jet bin vent filter shall each be equipped with instrumentation to continuously monitor the differential pressure across the respective unit. The Fuller-Draco Plenum Pulse 96-6-6000 baghouse shall also be equipped with instrumentation to continuously monitor the inlet temperature. The pressure and temperature gauges shall be positioned so that they are easily accessed and read. Additionally, audible and visual alarms shall be present to signal the need for corrective action in the event the temperature or pressure are outside the limits of normal operation established by the manufacturer or through compliance testing.
	2. The Raymond roller mill shall be equipped with a non-resettable hour meter. The non-resettable hour meter on the Raymond roller mill will be sufficient to monitor the number of hours of operation for the mill and the pneumatic conveyor.
	3. The Permittee shall monitor the number of hours operated by the Raymond roller mill and the pneumatic conveying system during each month and during the previous 12-month period (the current month and previous 11 months).
	4. The Permittee shall perform weekly 30- minute visible emissions inspections using EPA Method 22 (40 CFR Part 60, Appendix A-7) for the Fuller-Draco Plenum Pulse 96-6-6000 baghouse and the CAMCORP Model 7BH6x49 pulse-jet bin vent filter. As an alternative, the 30-minute visible emission inspection may be shortened to 6 minutes if no visible emissions are observed during this inspection period. The Method 22 test shall be conducted while the associated sources are in operation. The test is successful if no visible emissions are observed.
	5. The Permittee shall perform the following testing on the Fuller-Draco Plenum Pulse 96-6-6000 baghouse at least once per calendar year: <ul style="list-style-type: none"> <li>a. A visolite leak detection test ("black light and fluorescent powder"); and</li> <li>b. A visible emissions test, which shall be performed in accordance with 40 CFR Part 60, Appendix A, Method 9 by a person certified to perform visible emissions testing and while the associated sources are in operation.</li> </ul> Additional tests shall be performed as needed to locate leaks, bags failures, or other problems with normal operation of the control devices.
	6. The Permittee shall perform the following testing on the CAMCORP Model 7BH6x49 pulse-jet bin vent filter at least once per calendar year: <ul style="list-style-type: none"> <li>a. A visible emissions test, which shall be performed in accordance with 40 CFR Part 60, Appendix A, Method 9 by a person certified to perform visible emissions testing and while the associated sources are in operation.</li> </ul> Additional tests shall be performed as needed to locate leaks, bags failures, or other problems with normal operation of the control devices.

Table 3b	
EU#	Monitoring and Testing Requirements
14	<p>7. In accordance with 40 CFR 60.675(b)(1), the Permittee shall conduct initial stack testing within 60 days after achieving the maximum production rate at which EU #14 will be operated, but not later than 180 days after initial startup of EU #14, to determine compliance with the Raymond roller mill particulate matter standard contain in Table 2b, Emission Limit Condition #4 herein as follows:</p> <p>a. EPA Method 5 or Method 17 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR Part 60, Appendix A-3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.</p> <p>8. In accordance with 40 CFR 60.675(a) and (c)(1) and within 60 days after achieving the maximum production rate at which EU #14 will be operated, but not later than 180 days after initial startup of EU #14, the Permittee shall determine compliance with the fugitive emission limitations specified in Table 2a, Conditions #2 and #3, by using 40 CFR 60: Appendix A, Method 9 and the procedures in §60.11, with the following additions:</p> <p>a. The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).</p> <p>b. The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.</p> <p>9. In accordance with 40 CFR 60.675(c)(3), the duration of the Method 9 (40 CFR Part 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limitations herein must be based on the average of five 6-minute averages.</p> <p>10. In accordance with 40 CFR 60.675(d), the performance tests conducted to demonstrate compliance with the fugitive emission limit for the building shall be conducted while the Raymond roller mill inside the building is operating.</p> <p>11. In accordance with 40 CFR 60.675(i), if the initial performance test date for EU #14 falls during a seasonal shutdown (as defined in 40 CFR 60.671), then with approval from MassDEP, the Permittee may postpone the initial performance test until no later than 60 calendar days after resuming operation of EU #14.</p> <p>12. In accordance with Table 3 of 40 CFR Part 60, Subpart OOO, a repeat performance test according to 40 CFR 60.11 and 40 CFR 60.675 shall be conducted within 5 years from the previous performance test (as listed in Table 3b, Condition #7 herein) for fugitive emissions.</p> <p>13. Pursuant to 310 CMR 7.04(4)(a), the 9.5 MMBtu/hr natural gas-fired flash dryer shall be inspected and maintained in accordance with the manufacturer's recommendations and tested for efficient operation once each calendar year.</p>
Facility-wide	14. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13

**Table 3 Key:**

EU# = Emission Unit Number

**Table 4a**

EU#	Record Keeping Requirements
14	<ol style="list-style-type: none"> <li>1. The Permittee shall maintain comprehensive and accurate records of: <ol style="list-style-type: none"> <li>a. each Method 22 visible emissions test and each Method 9 visible emissions test for the Fuller-Draco Plenum Pulse 96-6-6000 baghouse and the CAMCORP Model 7BH6x49 pulse-jet bin vent filter as well as each visolite leak detection test ("black light and fluorescent powder") for the Fuller-Draco Plenum Pulse 96-6-6000 baghouse. For each test, the records shall include, but shall not be limited to, the identity of the baghouse or bin vent filter tested, test method used, the date and time of the test, identity of the person(s) performing the test, test results and any corrective actions taken, which shall be kept in a logbook onsite.</li> <li>b. daily records, at a minimum, of the pressure drop across the Fuller-Draco Plenum Pulse 96-6-6000 baghouse and the CAMCORP Model 7BH6x49 pulse-jet bin vent filter, including the time of day and date of each reading.</li> <li>c. daily records, at a minimum, of the inlet temperature to the Fuller-Draco Plenum Pulse 96-6-6000 baghouse, including the time of day and date of each reading.</li> <li>d. records of any maintenance or repairs performed on the Fuller-Draco Plenum Pulse 96-6-6000 baghouse and the CAMCORP Model 7BH6x49 pulse-jet bin vent filter, including, but not limited to, the number and locations of any damaged filters discovered and replaced.</li> <li>e. the amount of limestone processed by EU #14 during each month and during the previous 12-month period (the current month and previous 11 months).</li> <li>f. the number of hours operated, based on the hour meter, for the Raymond roller mill and the pneumatic conveying system during each month and during the previous 12-month period (the current month and previous 11 months).</li> <li>g. all inspection and maintenance activities.</li> </ol> </li> <li>2. Pursuant to 310 CMR 7.03(26)(e), records documenting any equipment replacement as provided in 310 CMR 7.03(26) and of visible emission observations as required by 310 CMR 7.03(26)(d) shall be maintained on-site in accordance with the provisions of 310 CMR 7.03(6).</li> <li>3. The Permittee shall maintain adequate records onsite to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). These records shall be compiled no later than the 15<sup>th</sup> day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at <a href="http://www.mass.gov/dep/air/approvals/aqforms.htm#report">http://www.mass.gov/dep/air/approvals/aqforms.htm#report</a></li> <li>4. The Permittee shall maintain records of monitoring and testing as required by Table 3.</li> <li>5. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.</li> <li>6. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.</li> </ol>

<b>Table 4b</b>	
<b>EU#</b>	<b>Record Keeping Requirements</b>
14	7. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	8. The Permittee shall maintain records required by this Plan Approval onsite for a minimum of five (5) years.
	9. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

**Table 4 Key:**

EU# = Emission Unit Number

SOMP = Standard Operating and Maintenance Procedure

USEPA = United States Environmental Protection Agency

<b>Table 5a</b>	
<b>EU#</b>	<b>Reporting Requirements</b>
14	1. Pursuant to 310 CMR 7.03(26)(f), replacement of any rock processing equipment (i.e. crushers, conveyor systems, screens, dust suppression systems and feeders) shall be reported to MassDEP in accordance with the provisions of 310 CMR 7.03(5).
	2. The Permittee shall notify MassDEP, in writing, the date on which EU #14 commences operation at the facility. This notice shall be provided to MassDEP within (5) days of commencing operation.
	3. The Permittee shall submit to MassDEP for approval a visible emission observation and stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	4. The Permittee shall submit to MassDEP a notification of the anticipated test date a minimum of 30 days prior to conducting the visible emission observations and stack emission test as required by Table 3a and 3b Monitoring and Testing Requirements, Conditions #6 and #7 herein.
	5. The Permittee shall submit to MassDEP, in writing, attention Permit Chief, Bureau of Waste Prevention, a final visible emission observation and stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3a and 3b Monitoring and Testing Requirements, Condition #6 and Condition #7 herein. This test report shall contain the results of the testing, a description of the test methods and procedures actually used in the performance of the tests, copies of all process data collected during the testing, copies of all raw test data and copies of all calculations generated during data analysis. The results of the testing shall be expressed in units which allow for a direct comparison, and determination of compliance, with the air contaminant emission limitations contained herein.
	6. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).

Table 5b	
EU#	Reporting Requirements
14	7. The Permittee shall notify the Western Regional Office of MassDEP, BWP Permit Chief by telephone [413-755-2115], email [marc.simpson@state.ma.us] or fax [413-784-1149], as soon as possible, but no later than one (3) days after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to BWP Permit Chief at MassDEP within ten (10) days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	8. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30-days from MassDEP's request.
	9. The Permittee shall report annually to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.

**Table 5 Key:**

EU# = Emission Unit Number

BWP = Bureau of Waste Prevention

#### 4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

- A. The Permittee shall comply with the Special Terms and Conditions as contained in Table 6 below:

Table 6a	
EU#	Special Terms and Conditions
14	1. EU #14 shall consist of the equipment specified in Table 1 herein.
	2. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the Raymond roller mill shall not be operated without the simultaneous operation of the Fuller-Draco Plenum Pulse 96-6-6000 baghouse.
	3. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the inlet temperature of the Fuller-Draco Plenum Pulse 96-6-6000 baghouse shall not exceed 250°F during operation.
	4. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the Permittee shall install an interlock that prevents operation of the Raymond roller mill if the Fuller-Draco Plenum Pulse 96-6-6000 baghouse is not in operation.
	5. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the system air used for the Raymond roller mill and the cyclone shall be exhausted to the Fuller-Draco Plenum Pulse 96-6-6000 baghouse.

<b>Table 6b</b>	
<b>EU#</b>	<b>Special Terms and Conditions</b>
14	6. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the material processed by the Raymond roller mill shall be transferred by a fully enclosed pneumatic conveying system.
	7. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the Raymond roller mill and pneumatic conveying system shall only be operated at the same time.
	8. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the 30" x 155' belt conveyor shall have a full enclosure except for where material enters and exits.
	9. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the pneumatic conveyor shall not be operated without the simultaneous operation of the CAMCORP Model 7BH6x49 pulse-jet bin vent filter.
	10. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the Permittee shall keep on hand a sufficient quantity of spare fabric collector bags for each fabric collector associated with the Raymond roller mill and the pneumatic conveying system in order to be able to immediately replace any bags requiring replacement due to deterioration resulting from routine operation of Raymond roller mill, pneumatic conveying system or associated fabric collector.
	11. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the drop heights from front-end loaders being used to unload bulk limestone into the hopper shall be kept as short as possible to minimize fugitive particulate matter emissions.
	12. Pursuant to the best available control technology provision of 310 CMR 7.02(8)(a)2, the Permittee shall employ all reasonable good housekeeping practices to minimize fugitive particulate matter emissions from EU #14.
	13. If, at any time, the plant, or any piece of equipment incorporated in the plant, is determined by MassDEP to be causing the emission of fugitive particulate matter in excess of the limitations specified in any applicable rule or regulation contained in 310 CMR 7.00 or in excess of the level which MassDEP considers to be the minimum attainable through the use of the best available control technology, the Permittee shall, upon notification by MassDEP, immediately take such control measures as are necessary to reduce the air contaminant emissions to within the level deemed acceptable by MassDEP.
Facility -wide	14. The Raymond roller mill and the 30" x 155' conveyor belt are subject to Subpart OOO of the federal Standards of Performance for New Stationary Sources for Nonmetallic Mineral Processing Plants, 40 CFR Part 60.670 through 60.676 and shall comply with the applicable requirements.
	15. The Permittee shall not construct any additional crushers, screens, conveyors, etc., at the facility without prior MassDEP approval unless said changes are exempt from plan approval in accordance with 310 CMR 7.00.
	16. The Permittee may make the approved changes herein, upon the submittal of an amended Title V Operating Permit Renewal Application (BWP AQ 12) which incorporates these changes.

**Table 6 Key:**

EU# = Emission Unit Number

CFR = Code of Federal Regulations

USEPA = United States Environmental Protection Agency

- B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as “shanty caps” and “egg beaters.” The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7 below, for the Emission Units that are regulated by this Plan Approval:

<b>Table 7</b>				
<b>EU#</b>	<b>Stack Height Above Ground (feet)</b>	<b>Stack Inside Exit Dimensions (feet)</b>	<b>Stack Gas Exit Velocity Range (feet per second)</b>	<b>Stack Gas Exit Temperature Range (°F)</b>
14 (Fuller-Draco Plenum Pulse 96-6- 6000 baghouse)	15	3.1x3.1	56	100-150
14 (CAMCORP Model 7BH6x49 pulse-jet bin vent filter )	30	1	42.5 - 53.3	80-120

**Table 7 Key:**

EU# = Emission Unit Number

°F = Degree Fahrenheit

## **5. GENERAL CONDITIONS**

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the

Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.

- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.
- K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

## **6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT**

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.



## **7. APPEAL PROCESS**

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts  
Department of Environmental Protection  
P.O. Box 4062  
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Should you have any questions concerning this Plan Approval, please contact Cortney Danneker by telephone at 413-755-2234, or in writing at the letterhead address.

Sincerely,

This final document copy is being provided to you electronically by the  
Department of Environmental Protection. A signed copy of this document  
is on file at the DEP office listed on the letterhead.

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Marc Simpson  
Air Quality Permit Chief  
Bureau of Waste Prevention  
Western Region

cc: WERO AQ plan file  
WERO AQ approval file

ecc: William Stengle, Berkshire Environmental Consultants, Inc.  
Yi Tian, DEP Boston  
Peter Czapienski, DEP Western Region